

Notice of Allowability

Application No.

09/780,123

Examiner

Thanh-Ha Dang

Applicant(s)

LECHELER-MOORE ET AL.

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/26/06.
2. ☒ The allowed claim(s) is/are 1-2, 4-10, 12-15, and 17-19 that are renumbered as 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

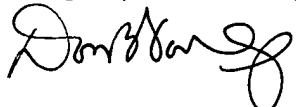
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 070306.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION.

Response to Amendment

1. Receipt of Applicant's Amendment filed 04/26/2006 is acknowledged.

EXAMINER'S AMENDMENT

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Kevin J. Zilka on July 3, 2006.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

1. (Previously Presented) A method used in a computer system for creating from operational data an historical data warehouse containing subject-oriented data, comprising:
 - a) obtaining operational data from a source system;
 - b) pre-processing said obtained operational data by a stepwise operation, wherein only the last operated upon data is recorded such that data recording is avoided during data addition for efficiency purposes;

c) transforming said pre-processed data into subject-oriented data by utilizing reusable primary keys and Relational Database Management System dates in an operating system of the source system to link related pre-processed data; and

d) storing said subject-oriented data in the historical data warehouse;

wherein said dates within said Relational Database Management System in said operating system of said source system are obtained by trigger or log-scraping of said Relational Database Management System;

wherein said pre-processing includes an insert function that returns a warning when associated subject-oriented data already exists in said historical data warehouse;

wherein said Relational Database Management System dates are utilized for distinctly characterizing said subject-oriented data when a plurality of tables containing operational data with duplicate primary keys are combined in said historical data warehouse;

wherein said subject-oriented data is stored in said historical data warehouse with an associated creation date and deletion date derived from said Relational Database Management System dates.

2. (Previously Presented) A method used in a computer system for creating from operational data records an historical data warehouse containing related subject-oriented data records, comprising:

- a) obtaining operational data records from a source system;
- b) pre-processing said obtained operational data records to generate pre-processed data records, wherein said pre-processing comprises operating on each operational data record in a serial manner, adding new data to an immediately prior operated-on record with an entry being recorded only for the last serially operated-on record such that data recording is avoided during data addition for efficiency purposes;
- c) transforming said pre-processed data records into related subject-oriented data records, wherein said transforming comprises linking related pre-processed data records together by means of reusable primary keys on said source system and dates within a Relational Database Management System in an operating system of said source system; and
- d) storing said related subject-oriented data records in the historical data warehouse;

wherein said dates within said Relational Database Management System in said operating system of said source system are obtained by trigger or log-scraping of said Relational Database Management System;

wherein said pre-processing includes an insert function that returns a warning when associated subject-oriented data already exists in said historical data warehouse;

wherein said dates within said Relational Database Management System are utilized for distinctly characterizing said subject-oriented data when a plurality

of tables containing operational data with duplicate primary keys are combined in said historical data warehouse;

wherein said subject-oriented data is stored in said historical data warehouse with an associated creation date and deletion date derived from said dates within said Relational Database Management System.

3. (Cancelled)

4. (Original) A method according to Claim 1, further comprising the step of accessing the historical data warehouse by standard viewing means.

5. (Previously Presented) A method used in a computer system for creating from operational data records an historical data warehouse containing related subject-oriented data records, comprising:

- a) obtaining operational data records from a legacy source system;
- b) pre-processing said obtained operational data records to generate pre-processed data records, wherein said pre-processing comprises operating on each operational data record in a stepwise manner, adding new data to an immediately prior operated-on record with an entry being recorded only for the record having the last stepwise operation such that data recording is avoided during data addition for efficiency purposes;

- c) transforming said pre-processed data records into related subject-oriented data records, wherein said transforming comprises linking related pre-processed data records together by means of reusable primary keys on said source system and dates obtained by trigger or log-scraping a Relational Database Management System in an operating system of said legacy source system; and
- d) storing said related subject-oriented data records in the historical data warehouse wherein said pre-processing includes an insert function that returns a warning when associated subject-oriented data already exists in said historical data warehouse;

wherein said dates are utilized for distinctly characterizing said subject-oriented data when a plurality of tables containing operational data with duplicate primary keys are combined in said historical data warehouse;

wherein said subject-oriented data is stored in said historical data warehouse with an associated creation date and deletion date derived from said dates.

6. (Original) A method according to Claim 5, further comprising the step of accessing the historical data warehouse by standard viewing means.

7. (Currently Amended) A computer program embodied on a computer readable storage medium that generates from operational data from a source

system an historical data warehouse containing subject-oriented data, comprising:

a) a preprocessing module, wherein said preprocessing module obtained said operational data by a stepwise operation, wherein only the last operated upon data is recorded such that data recording is avoided during data addition for efficiency purposes and

b) a transforming module, wherein said transforming module transform said preprocessed data into subject-oriented data by utilizing reusable primary keys on the source system and Relational Database Management System dates in an operating system of the source system to link related preprocessed data;

wherein said dates within said Relational Database Management System in said operating system of said source system are obtained by trigger or log-scraping of said Relational Database Management System;

wherein said pre-processing module performs an insert function that returns a warning when associated subject-oriented data already exists in said historical data warehouse;

wherein said Relational Database Management System dates are utilized for distinctly characterizing said subject-oriented data when a plurality of tables containing operational data with duplicate primary keys are combined in said historical data warehouse;

wherein said subject-oriented data is stored in said historical data warehouse with an associated creation date and deletion date derived from said Relational Database Management System dates.

8. (Original) A computer program according to Claim 7, further comprising a storage module for storing said subject-oriented data in an easily accessible format.

9. (Currently Amended) A computer system used to create from operational data records an historical data warehouse containing related subject-oriented data records, comprising:

a processor;

[[a))] means for obtaining operational data records from a source computer system;

[[b))] pre-processing means for pre-processing said obtained operational data records to generate pre-processed data records, wherein said pre-processing means operates on each operational data record in a serial manner, adding new data to an immediately prior operated-on record with an entry being recorded only for the last serially operated-on record such that data recording is avoided during data addition for efficiency purposes;

[[c))] transforming means for transforming said pre-processed data records into related subject-oriented data records, wherein said transforming means links

related pre-processed data records together by means of reusable primary keys on said source computer system and dates within a Relational Database Management System in an operating system of said source computer system; and

[[d))] storage means for storing said related subject-oriented data records in the historical data warehouse;

wherein said dates within said Relational Database Management System in said operating system of said source system are obtained by trigger or log-scraping of said Relational Database Management System;

wherein said pre-processing includes an insert function that returns a warning when associated subject-oriented data already exists in said historical data warehouse;

wherein said dates within said Relational Database Management System are utilized for distinctly characterizing said subject-oriented data when a plurality of tables containing operational data with duplicate primary keys are combined in said historical data warehouse;

wherein said subject-oriented data is stored in said historical data warehouse with an associated creation date and deletion date derived from said dates within said Relational Database Management System.

10. (Original) A computer system according to Claim 9, further comprising means for accessing the historical data warehouse by standard viewing means.

11. (Cancelled)

12. (Previously Presented) A method according to Claim 1, wherein said historical data warehouse includes a standard set of core reports, components and metadata.

13. (Currently Amended) A method according to Claim 1, wherein said pre-processing includes at least one of an ignore function, an update function, and a replicate function.

14. (Previously Presented) A method according to Claim 13, wherein said replicate function includes a delete function.

15. (Previously Presented) A method according to Claim 13, wherein said pre-processing associated with said update function returns an error when associated subject-oriented data does not exist in said historical data warehouse.

16. (Cancelled)

17. (Previously Presented) A method according to Claim 1, wherein said stepwise operation includes performing a function on immediately previous data that is not original data.

18. (Previously Presented) A method according to Claim 1, wherein said related pre-processed data has different descriptions recorded over time.

19. (Previously Presented) A method according to Claim 1, wherein said Relational Database Management System dates are utilized for placing said related pre-processed data of the subject-oriented data in a temporal order.

20. (Cancelled)

21. (Cancelled)

Allowable Subject Matter

1. Claims 1-2, 4-10, 12-15 and 17-19 are allowed and are renumbered as 1-16.

The following is an examiner's statement of reasons for allowance: Claims 1-2, 4-10, 12-15 and 17-19 are allowable because the prior art made of record does not teach or fairly suggest the combination of elements as recited in independent Claims 1-2, 5, 7 and 9.

Specifically, the prior art of record does not teach:

- pre-processing said obtained operational data by a stepwise operation, wherein only the last operated upon data is recorded such that data recording

is avoided during data addition for efficiency purposes taken with the other limitations as recited in Claim 1.

- wherein said dates within said Relational Database Management System are utilized for distinctly characterizing said subject-oriented data when a plurality of tables containing operational data with duplicate primary keys are combined in said historical data warehouse taken with the other limitations as recited in Claim 2.
- transforming said pre-processed data records into related subject-oriented data records, wherein said transforming comprises linking related pre-processed data records together by means of reusable primary keys on said source system and dates obtained by trigger or log-scraping a Relational Database Management System in an operating system of said legacy source system taken with the other limitations as recited in Claim 5.
- a preprocessing module, wherein said preprocessing module obtained said operational data by a stepwise operation, wherein only the last operated upon data is recorded such that data recording is avoided during data addition for efficiency purposes taken with the other limitations as recited in Claim 7.
- pre-processing means for pre-processing said obtained operational data records to generate pre-processed data records, wherein said pre-processing means operates on each operational data record in a serial manner, adding new data to an immediately prior operated-on record with an entry being recorded only for the last serially operated-on record such that data recording

is avoided during data addition for efficiency purposes taken with the other limitations as recited in Claim 9.

The dependent claims being definite, further limiting and fully enabled by the Specification are also allowed.

These features, together with the other limitations of the independent claim are novel and non-obvious over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

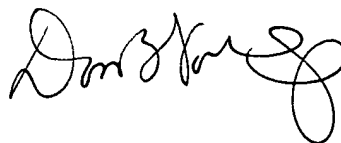
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Ha Dang whose telephone number is 571-272-4033. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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